

CLAIMS

1. A stain-resist composition comprising:

a crosslinking agent comprising at least one
polymer having at least two hydroxyl groups;
and a stain-resist agent comprising at least
one polymer.
2. The stain-resist composition, according to Claim 1,
wherein said crosslinking agent is a polybutadiene
having at least two hydroxyl groups.
3. The stain-resist composition of Claim 2, wherein
said polybutadiene is hydroxyl-terminated.
4. The stain-resist composition, according to Claim 2,
wherein said polybutadiene is further functionalized
with at least one epoxy group.
5. The stain-resist composition of Claim 3, wherein
said hydroxy terminated polybutadiene is grafted
with maleic anhydride.
6. The stain-resist composition of Claim 1, wherein
said crosslinking agent contains at least one vinyl
group.

7. The stain-resist composition of Claim 1, wherein said stain-resist agent is a polymer selected from the group consisting of polymethacrylic acid and hydrolyzed maleic anhydride copolymerized with at least one monomer, and mixtures thereof.
8. The stain-resist composition of Claim 7, wherein the number average molecular weight of said polymethacrylic acid is at least 300,000.
9. The stain-resist composition, according to Claim 7, wherein said monomer is selected from the group consisting of α -olefins and styrenes.
10. The stain-resist composition of Claim 9, wherein said alpha-olefin is octene.
11. The stain-resist composition, according to Claim 7, wherein up to 70 mole % of said maleic anhydride may be replaced by a monomer selected from the group consisting of acrylic acid, methacrylic acid, itaconic acid, vinyl sulfonic acid, vinyl phosphonic acid, styrene sulfonic acid, alkyl(C₁₋₄) acrylate, alkyl(C₁₋₄) methacrylate, vinyl acetate, vinyl chloride, vinylidene chloride, vinyl sulfides, N-vinyl pyrrolidone, acrylonitrile, acrylamide, and mixtures thereof.

12. The stain-resist composition of Claim 1, wherein said stain-resist agent further comprises a sulfonated phenol-formaldehyde condensation product.
13. The stain-resist composition of Claim 1, further comprising a pH-adjusting agent.
14. The stain-resist composition of Claim 13, wherein said agent adjusts the pH to from about 1 to about 8.
15. The stain-resist composition of Claim 13, wherein said agent adjusts the pH to from about 3 to about 4.
16. A process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate, the process comprising contacting said polyamide substrate with a stain-resist composition comprising:

a crosslinking agent comprising at least one polymer having at least two hydroxyl groups;
and a stain-resist agent comprising at least one polymer.
17. The process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate,

according to Claim 16, wherein said crosslinking agent is a polybutadiene having at least two hydroxyl groups.

18. The process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate, according to Claim 17, wherein said hydroxyl groups are terminal to said polybutadiene.
19. The process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate, according to Claim 17, wherein said polybutadiene is further functionalized with at least one epoxy group.
20. The process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate, according to Claim 16, wherein said crosslinking agent contains at least one vinyl group.
21. The process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate, according to Claim 18, wherein said hydroxy-terminated polybutadiene is grafted with maleic anhydride.

22. The process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate, according to Claim 16, wherein said stain-resist agent is a polymer selected from the group consisting of polymethacrylic acid and hydrolyzed maleic anhydride copolymerized with at least one monomer, and mixtures thereof.
23. The process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate, according to Claim 16, wherein the number average molecular weight of said polymethacrylic acid is at least 300,000.
24. The process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate, according to Claim 22, wherein said monomer is selected from the group consisting of α -olefins and styrenes.
25. The process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate, according to Claim 24, wherein said alpha-olefin is octene.
26. The process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate,

according to Claim 22, wherein up to 70 mole % of said maleic anhydride may be replaced by a monomer selected from the group consisting of acrylic acid, methacrylic acid, itaconic acid, vinyl sulfonic acid, vinyl phosphonic acid, styrene sulfonic acid, alkyl(C₁₋₄) acrylate, alkyl(C₁₋₄) methacrylate, vinyl acetate, vinyl chloride, vinylidene chloride, vinyl sulfides, N-vinyl pyrrolidone, acrylonitrile, acrylamide, and mixtures thereof.

27. The process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate, according to Claim 16, wherein said stain-resist composition further comprises a sulfonated phenol-formaldehyde condensation product.
28. The process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate, according to Claim 16, wherein said stain-resist composition further comprising a pH-adjusting agent.
29. The process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate, according to Claim 28, wherein said agent adjusts the pH to from about 1 to about 8.

30. The process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate, according to Claim 28, wherein said agent adjusts the pH to from about 3 to about 4.
31. The process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate, according to Claim 16, further comprising drying.
32. The process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate, according to Claim 31, wherein said drying is carried out at a temperature of from about 100° to about 190°C.
33. The process for imparting resistance to staining by coffee and/or acid dyes to a polyamide substrate, according to Claim 31, wherein said drying is carried out at a temperature of from about 130° to about 150°C.
34. A stain-resist composition in association with a polyamide substrate wherein said association comprises the composition of Claim 1.

35. An article of manufacture comprising a polyamide substrate in association with the stain-resist composition of Claim 1.
36. A fiber in association with the stain-resist composition of Claim 1.
37. The association of Claim 36 wherein said fiber is a polymer selected from the group consisting of polyamide, polyester, polyolefin, and wool.
38. A polyamide nylon or wool carpet in association with the stain-resist composition of Claim 1.